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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Koichi SATO ) : Examiner: T. Rude  
Appln. No.: 09/826,878 ) : Group Art Unit: 2871  
Filed: April 6, 2001 ) : Allowed: May 25, 2004  
For: LIQUID CRYSTAL COMPOSITION, ) : Confirm: 3335  
DEVICE AND APPARATUS : August 4, 2004

**Mail Stop Issue Fee**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

LETTER SUBMITTING COMMENTS ON  
STATEMENT OF REASONS FOR ALLOWANCE

Sir:

Applicant respectfully submits the following remarks regarding the Examiner's Statement of Reasons for Allowance attached to the Notice of Allowance dated May 25, 2004:

U.S. Patent No. 6,061,113 ("Kawata") is directed to provision of an optical compensatory sheet by using a discotic liquid crystal composition. Accordingly, the sheet is required to be transparent without absorbing and scattering light. In Example 1 of Kawata, when transmittance is observed, the light is blocked at the angle, between the axes of a polarizer and the longitudinal direction of the sheet, of 45 degrees. This shows that the

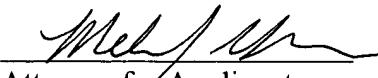
discotic liquid crystal compound is aligned along a single direction, and thus, there is no non-uniformity in refractive index causing the scattering of light, i.e., this shows that the sheet is transparent when the polarizer is not used.

Kawata discloses a mixture of the discotic liquid crystal compound and a rod-like liquid crystal compound. The rod-like liquid crystal compound is used to adjust the liquid crystal phase or alignment temperature or to accelerate or inhibit the polymerization reaction (col. 11, line 65 - col. 12, line 2). The ratio of the discotic liquid crystal compound in the mixture is preferably not smaller than 50 wt.%, and more preferably not smaller than 80 wt.% (col. 12, lines 2-4). Accordingly, it is preferable that a larger amount of the discotic liquid crystal compound is used. In order to create such a state that the discotic liquid crystal compound and the rod-like liquid crystal compound are disposed in mutually separate phases, it is necessary to use the rod-like liquid crystal compound in a certain amount. In other words, the discotic liquid crystal compound is required to have an upper limit of the ratio thereof in the mixture. However, there is no upper limit of the ratio of the discotic liquid crystal compound in Kawata.

Accordingly, the mixture of Kawata is not intended to create the state that the discotic and rod-like liquid crystal compounds are disposed in mutually separate phases. As a result, Kawata fails to teach or suggest the liquid crystal device according to the present invention.

Applicant's undersigned attorney may be reached in Washington, D.C. by telephone at (202) 530-1010. All correspondence should continue to be directed to the address listed below.

Respectfully submitted,

  
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